

**(19) World Intellectual Property Organization**  
International Bureau



**(43) International Publication Date**  
**7 December 2000 (07.12.2000)**

**PCT**

**(10) International Publication Number**  
**WO 00/73797 A3**

- (51) **International Patent Classification<sup>7</sup>:** G01N 33/92

(21) **International Application Number:** PCT/US00/14827

(22) **International Filing Date:** 26 May 2000 (26.05.2000)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**  
60/136,709 28 May 1999 (28.05.1999) US

(71) **Applicant (for all designated States except US):** THE GOVERNMENT OF THE UNITED STATES OF AMERICA, as represented by THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES [US/US]; Bethesda, MD 20892 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** REMALEY, Alan, T. [US/US]; 4510 Traymore Street, Bethesda, MD 20814 (US). SAMPSON, Maureen, L. [US/US]; 1324 Alderton Lane, Silver Spring, MD 20906 (US). CSAKO, Gyorgy [US/US]; P.O. Box 10576, Rockville, MD 20849 (US).

(74) **Agents:** HYMAN, Laurence, J. et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834 (US).

(81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

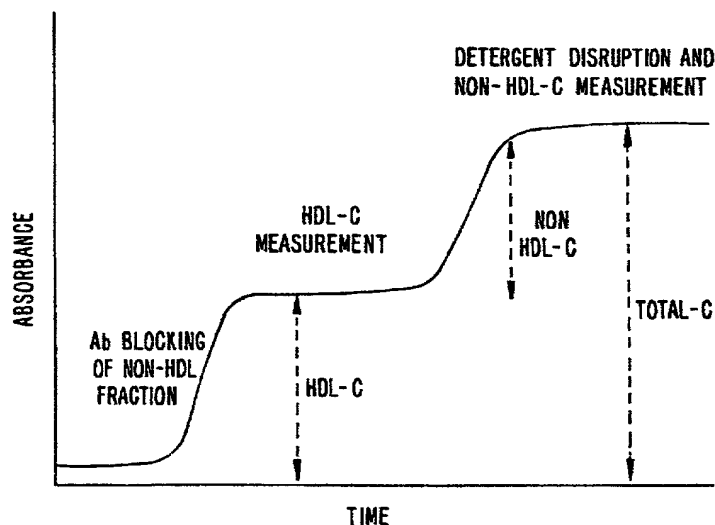
(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**  
— with international search report

(88) **Date of publication of the international search report:** 13 September 2000

*[Continued on next page]*

- (54) Title:** HOMOGENEOUS TESTS FOR SEQUENTIALLY DETERMINING LIPOPROTEIN FRACTIONS



**(57) Abstract:** The invention provides new homogeneous assays for the determination of the amount of LDL-C, of HDL-C, and of total cholesterol present in a sample. The method comprises complexing a first lipoprotein fraction with a complex-forming agent, such as an antibody, using enzymes to detect cholesterol in the non-complexed lipoprotein fraction, measuring the amount of cholesterol in the non-complexed fraction to provide a first cholesterol value, and then dissociating the complexed lipoprotein fraction from the complex-forming agent so that that cholesterol is available to be a substrate for the enzymes. The total amount of cholesterol present in the sample can then be determined. Further, the first cholesterol value obtained can be subtracted from the total cholesterol to obtain a value for the first lipoprotein fraction present in the sample. Optionally, a triglyceride assay can then also be performed on the sample in the same tube.

Gene	Accession	Length (bp)	GC (%)	GC (3rd pos) (%)	GC (4th pos) (%)	GC (5th pos) (%)	GC (6th pos) (%)	GC (7th pos) (%)	GC (8th pos) (%)	GC (9th pos) (%)	GC (10th pos) (%)	GC (11th pos) (%)	GC (12th pos) (%)	GC (13th pos) (%)	GC (14th pos) (%)	GC (15th pos) (%)	GC (16th pos) (%)	GC (17th pos) (%)	GC (18th pos) (%)	GC (19th pos) (%)	GC (20th pos) (%)	GC (21st pos) (%)	GC (22nd pos) (%)	GC (23rd pos) (%)	GC (24th pos) (%)	GC (25th pos) (%)	GC (26th pos) (%)	GC (27th pos) (%)	GC (28th pos) (%)	GC (29th pos) (%)	GC (30th pos) (%)	GC (31st pos) (%)	GC (32nd pos) (%)	GC (33rd pos) (%)	GC (34th pos) (%)	GC (35th pos) (%)	GC (36th pos) (%)	GC (37th pos) (%)	GC (38th pos) (%)	GC (39th pos) (%)	GC (40th pos) (%)	GC (41st pos) (%)	GC (42nd pos) (%)	GC (43rd pos) (%)	GC (44th pos) (%)	GC (45th pos) (%)	GC (46th pos) (%)	GC (47th pos) (%)	GC (48th pos) (%)	GC (49th pos) (%)	GC (50th pos) (%)
Gene 1	Accession 1	Length 1	GC 1	GC 3rd pos 1	GC 4th pos 1	GC 5th pos 1	GC 6th pos 1	GC 7th pos 1	GC 8th pos 1	GC 9th pos 1	GC 10th pos 1	GC 11th pos 1	GC 12th pos 1	GC 13th pos 1	GC 14th pos 1	GC 15th pos 1	GC 16th pos 1	GC 17th pos 1	GC 18th pos 1	GC 19th pos 1	GC 20th pos 1	GC 21st pos 1	GC 22nd pos 1	GC 23rd pos 1	GC 24th pos 1	GC 25th pos 1	GC 26th pos 1	GC 27th pos 1	GC 28th pos 1	GC 29th pos 1	GC 30th pos 1	GC 31st pos 1	GC 32nd pos 1	GC 33rd pos 1	GC 34th pos 1	GC 35th pos 1	GC 36th pos 1	GC 37th pos 1	GC 38th pos 1	GC 39th pos 1	GC 40th pos 1	GC 41st pos 1	GC 42nd pos 1	GC 43rd pos 1	GC 44th pos 1	GC 45th pos 1	GC 46th pos 1	GC 47th pos 1	GC 48th pos 1	GC 49th pos 1	GC 50th pos 1
Gene 2	Accession 2	Length 2	GC 2	GC 3rd pos 2	GC 4th pos 2	GC 5th pos 2	GC 6th pos 2	GC 7th pos 2	GC 8th pos 2	GC 9th pos 2	GC 10th pos 2	GC 11th pos 2	GC 12th pos 2	GC 13th pos 2	GC 14th pos 2	GC 15th pos 2	GC 16th pos 2	GC 17th pos 2	GC 18th pos 2	GC 19th pos 2	GC 20th pos 2	GC 21st pos 2	GC 22nd pos 2	GC 23rd pos 2	GC 24th pos 2	GC 25th pos 2	GC 26th pos 2	GC 27th pos 2	GC 28th pos 2	GC 29th pos 2	GC 30th pos 2	GC 31st pos 2	GC 32nd pos 2	GC 33rd pos 2	GC 34th pos 2	GC 35th pos 2	GC 36th pos 2	GC 37th pos 2	GC 38th pos 2	GC 39th pos 2	GC 40th pos 2	GC 41st pos 2	GC 42nd pos 2	GC 43rd pos 2	GC 44th pos 2	GC 45th pos 2	GC 46th pos 2	GC 47th pos 2	GC 48th pos 2	GC 49th pos 2	GC 50th pos 2

WO 00/73797 A3